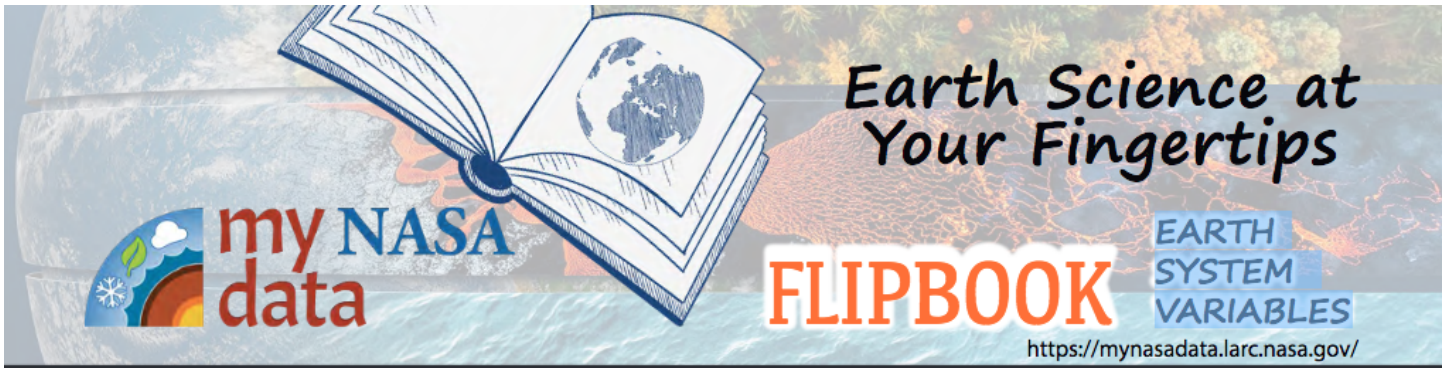
My NASA Data - Lesson Plans

Flipbooks: Earth System Variables (Student Activity)



Overview

How does the Earth System change over time?

NASA visualizers take data – numbers, codes – and turn them into animations people can see and quickly understand. You can become a data visualizer by creating your own flipbook animations using maps of science variables that NASA scientists commonly study to better understand the Earth System. There are six flipbooks available for different science variables: aerosols, cloud coverage, vegetation concentrations, precipitation, incoming solar radiation, and surface temperature. Each frame in the flipbooks shows monthly averages collected in 2016 and 2017.

Why Does NASA Study This Phenomenon?

NASA satellites collect data to help unlock the unexpected wonders of how our Earth works as a system.

Essential Questions

1. What do the colors in the flipbook represent?
2. How does this variable change over time?
3. Why do you think these changes occur?
4. What is affected by these changes?

Materials Required

- Binder clip (small)
- Scissors
- Color PDF's printed on regular or cardstock paper

Technology Requirements

- Standalone Lesson (no technology required)

Procedure

1.

Credit: NASA/My NASA DataPRINT (in color) flipbook on paper. (One per student)

2. CUT cardstock along the dotted line, making 26 frames.
3. STACK the 26 frames in order. The frames are numbered.
4. CLIP the stack of frames together, with the binder clip.
5. FLIP through the stack quickly.
6. Watch and enjoy the animation.

Looking to Scaffold Student Learning Using Data Sets like these?

1. Visit the Earth System Poster Card Learning Activity Guide for guiding questions and pointers for engaging the learner using images like these.
2. Check out the Data Cube Guide (See Map Data) for a hands-on strategy using dice/questions to guide students' data analysis.